

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

# approach

February 2003



*Never a Dull Moment*

**When You're No Longer 20/20**

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The Naval Safety Center's Aviation Magazine

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On the Cover

Volume 48 No. 2

Hornets from VFA-106 Gladiators, flown by Cdr. Jim Webb and Ltjg. Van Pietersom, perform a section takeoff at NAS Oceana. Photo by Matthew J. Thomas

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## Mission Statement

Mishaps waste our time and resources. They take our Sailors, Marines and civilian employees away from their units and workplaces and put them in hospitals, wheelchairs and coffins. Mishaps ruin equipment and weapons. They diminish our readiness.

This magazine's goal is to help make sure that personnel can devote their time and energy to the mission, and that any losses are due to enemy action, not to our own errors, shortcuts or failure to manage risk.

We believe there is only one way to do any task: the way that follows the rules and takes precautions against hazards. Combat is hazardous enough; the time to learn to do a job right is before combat starts.

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## Features

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This is your basic cat-hitching-a-ride story.

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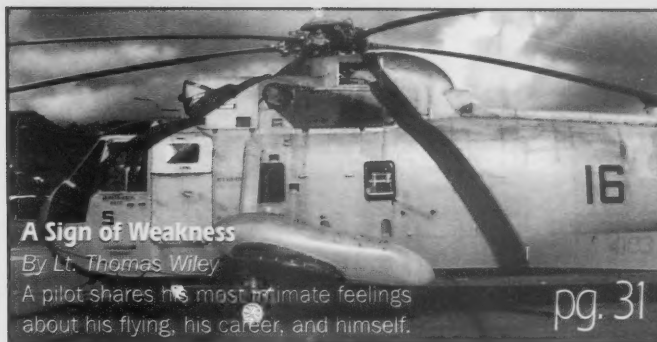
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**Have you heard the one about the sailor, the Zippo and the gas tank?**

**Check out the Summary of Mishaps at:**

<https://138.139.49.5/messages/alsafe/fridayfunnies.htm>

Summary of Mishaps December 2002

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Thanks for helping with this issue...

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Lt. John Digiovacchino, VAW-113

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# 13,500 Feet of Runway and Nowhere to Go

By Ltjg. Michael Stokes

**I**t was an early Tuesday morning. I just had left the RAG a few weeks earlier, and now I was a new fleet aviator.

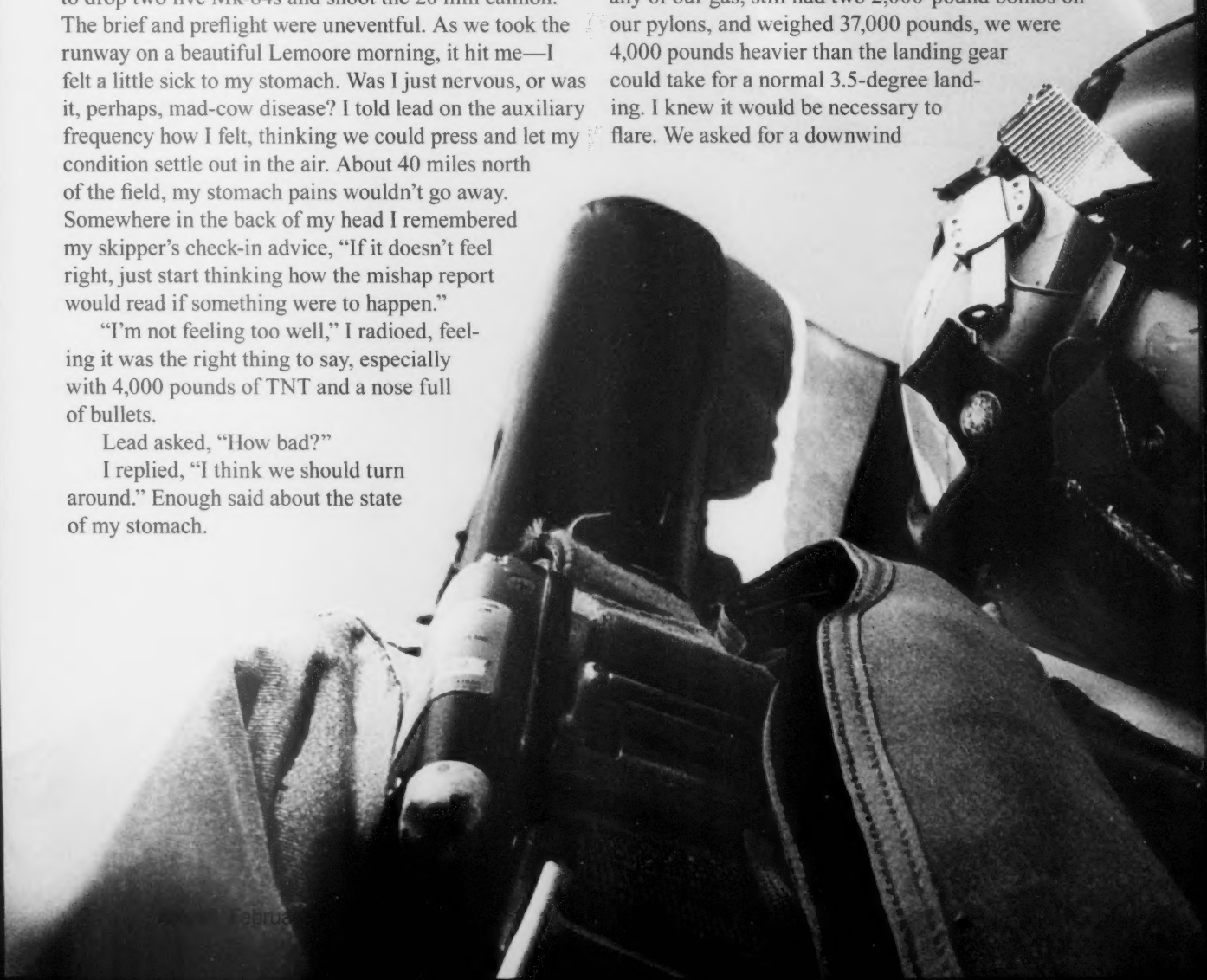
I couldn't believe my good fortune: After only a couple weeks in the squadron, I was going to Fallon to drop two live Mk-84s and shoot the 20 mm cannon. The brief and preflight were uneventful. As we took the runway on a beautiful Lemoore morning, it hit me—I felt a little sick to my stomach. Was I just nervous, or was it, perhaps, mad-cow disease? I told lead on the auxiliary frequency how I felt, thinking we could press and let my condition settle out in the air. About 40 miles north of the field, my stomach pains wouldn't go away. Somewhere in the back of my head I remembered my skipper's check-in advice, "If it doesn't feel right, just start thinking how the mishap report would read if something were to happen."

"I'm not feeling too well," I radioed, feeling it was the right thing to say, especially with 4,000 pounds of TNT and a nose full of bullets.

Lead asked, "How bad?"

I replied, "I think we should turn around." Enough said about the state of my stomach.

So, we did a 180 and went back to the field as quickly as we could. I was breaking out in a cold sweat and shaking and knew it was bad, but I tried to keep the task at hand above all else: landing the jet. I checked the gross weight of the jet. Since we barely had used any of our gas, still had two 2,000-pound bombs on our pylons, and weighed 37,000 pounds, we were 4,000 pounds heavier than the landing gear could take for a normal 3.5-degree landing. I knew it would be necessary to flare. We asked for a downwind



entry, but I didn't recognize we were so close to the field, and I didn't take enough separation. We had to depart and re-enter—the number one sign I wasn't 100 percent physically or mentally “in the game.”

My lead asked if I knew what I was doing. I assured him I did. We came in for the not-so-hot, 0.3-mile, in-trail break. I did all the landing checks and noticed my approach speed was 148 knots, faster than I was used to. I verified it to be correct and flew a slightly high ball and flared to land.

Here's where the situation caught up with me. On touchdown, I brought back the power and executed a couple of bad techniques, the same ones I had been using for flying the Hornet the last seven months. First, I pushed the stick forward, getting the nosewheel on the ground for steering authority—a bad technique.

Second, I got on the brakes early because of the higher landing speed. Unlike Hornets I had flown previously, this one didn't want to slow down. I extended the speed brake to increase the drag and to slow. At 100 knots, with my feet firmly on the brakes, I pulled the stick toward my lap to get the huge stabilators into the wind to create more drag. I saw lead's plane getting bigger in the wind-screen and finally passed him at the

two board. I elected not to take a long-field arrestment, fearing the cable might recenter my jet, sending it into his.

“Watch your brakes, you're smoking them!” I heard over the radio, as I did my runway lead change.

I was driving the brake pedals through the firewall, fearing the inevitable—I was going off the end of the 13,500-foot runway. I tried to use the nosewheel steering to ground loop the jet on the runway, but I felt the Hornet was leaning too much, so I shut down both engines and traveled 10 feet into the grassy dirt.

I heard a call to tower, “You better send the fire trucks; there's a fire under his jet.”

As if I wasn't scared already, that call spiced it up a notch. I safed the seat, unstrapped, turned off the battery, and jumped down. As I ran from the jet, squadron AOs were the first on scene with a fire extinguisher. Our brave AO1 put out the grass fire, and the base firemen put out the brake fire. I quickly was driven to the squadron and started recollecting everything that had happened. The lessons learned were many.

\* As all Hornet pilots know, the jet records everything. Postflight ECAMS made it all clear. I thought I had brought back the throttles, but it turns out they still were around 85 percent for the first 10 seconds on deck. I also used excessive brake force too early on post-touchdown, along with pushing full forward on the stick. When I needed the brakes, it was too late.

\* Since I was new to the squadron, and because dropping live bombs and shooting the gun was such a good deal, I was too eager to complete the mission. I should have recognized I was not feeling well, taxied back, and let my lead have his good deal.

\* I successfully had stopped the Hornet many times, using poor landing techniques. I definitely was wrong to push the stick forward, which actually flattens the stabilators. I also was wrong to apply the brakes so early.

\* Compartmentalization is the key to this business. Although I physically and mentally was out of the game, the only way to solve my problem was to unstrap while I still was safe in the chocks.

We learn something new everyday in our aircraft, and we increase our knowledge with experience and communication with fellow aviators. Ask questions, and share your experiences—good and bad—and everyone benefits.

Ltjg. Stokes flies with VFA-94.







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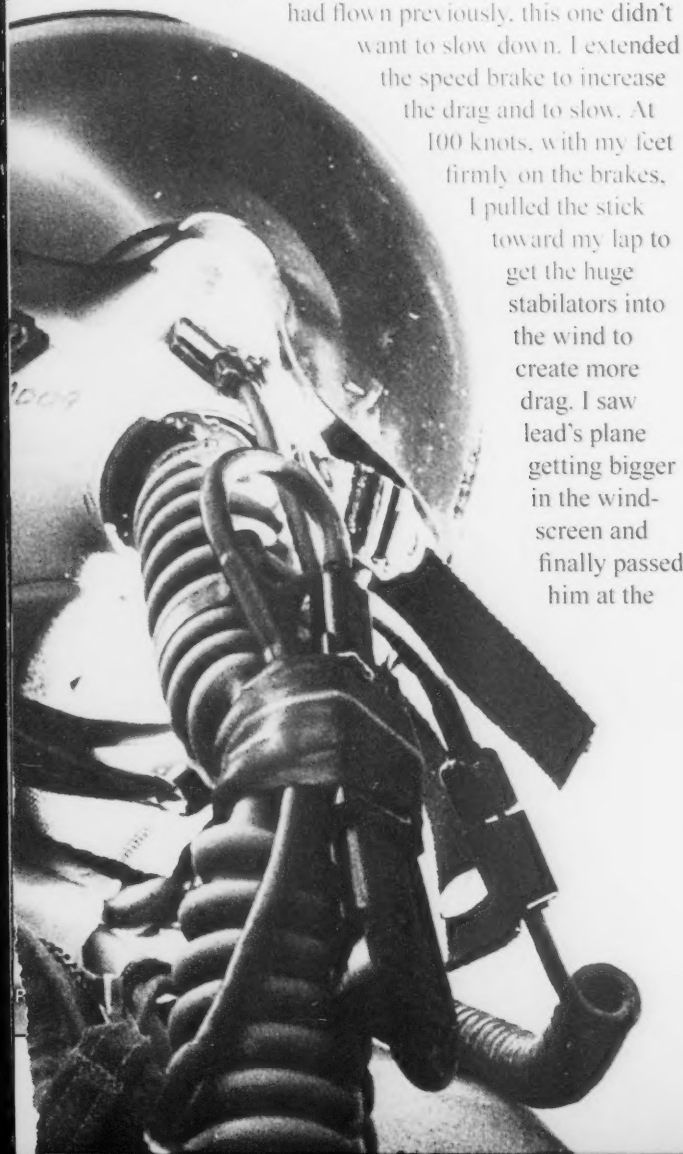
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Ltjg. Stokes flies with VFA-94.



# Never a Dull Moment

By Lt. Chris Ognek

Each platform in naval aviation has a dreaded emergency scenario that, while rarely or never seen in flight, invariably appears during NATOPS-simulator training. The only way to even the odds with these scenarios is to crack open the

NATOPS every now and then and to squeeze every ounce of training out of your precious flight time. In the land of Prowlers, one such scenario is the flaps 30/no slats approach to the ship. Here are a few lessons learned from my night flaps 30/no slats approach to the ship.

We were on the last event of the night, conducting blue-water ops on board USS *Kitty Hawk* in the South Pacific. I was on a short, night sortie to reset my landing currency before we pulled into Singapore. After an uneventful cycle, I tried to dirty-up on final approach. The slats extended





just one inch, with a corresponding barberpole in the landing-gear-position indicator (IPI). We circled overhead at 2,000 feet to troubleshoot the problem. We eventually got to the checklist item to electrically lower the slats. As I put the electric flaps-slats switch to the down position, the flaps moved to 30 degrees, they remained at their one-inch-extended position, and the emergency-slats-motor circuit breaker popped—not a good configuration for landing a Prowler at sea.

The required increase in airspeed and the extremely narrow margin between the angle of attack required to catch a wire and stall makes this configuration especially challenging. Because of wind-over-deck requirements and hook limitations, we decided to come aboard in a flaps 30/no slats configuration. The base airspeed for this approach is 127 knots, and it is flown at 13 units; normal Prowler approaches are flown at 17 units.

In addition, NATOPS states: "WARNING-Maintain airspeed. During waveoffs or bolters in this configuration, over-rotation must be avoided. Above 14 units AOA, flying qualities deteriorate rapidly with an abrupt pitchup/wing drop occurring at 15 units AOA. Do not attempt to flare during landing. This may result in pitchup."

It took three attempts to get aboard, with one pass a hook-skip bolter, one a waveoff (SIM), and finally an OK 1-wire.

My first indication the slats were not extending was the barberpoled IPI. I did not decelerate rapidly to on-speed when I dirtied-up, so, at 160 knots, before I could feel the problem, I told the crew the slats were not extended. With 7,000 pounds of gas, the calculated approach speed was 138 knots. I hit 13 units angle of attack (AOA) several knots

faster than that, so I flew AOA for the approaches.

While flying around the boat, there was no sweet-trim spot for 13 units. I constantly trimmed and bunted the nose to stay at or below 13. The jet wanted to go slow. On two occasions, I hit 14 units and op-checked the rapid deterioration of flying qualities. It was comparable to the standard clean-approach-to-stall practiced in the FRS but much less comfortable at an altitude of 2,000 feet.

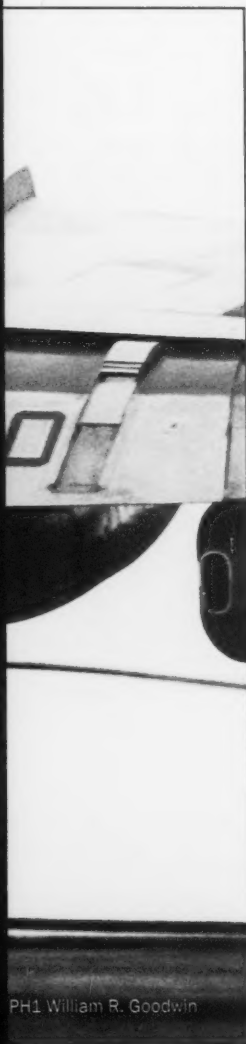
Glide-slope control was by far the most challenging, with lineup corrections taking a close second. I used larger power corrections than normal for extra power, and I was flying in a configuration I never before had seen. I was very hesitant to pull a lot of power, which caused me to work on the slightly overpowered side during the approach. As the saying goes, "Be smooth. If you can't be smooth, be high."

The approach was very flat, as should be expected at 13 units. Staring at a red chevron doesn't make it any easier. We practice flaps 30/no slats approaches at the beach, but this boat approach was truly a new sight. My earlier flying-qualities op-check had convinced me that I didn't want to try any type of hook set to compensate for the flat, fast approach. I, however, did make an extra effort to maintain attitude as my wheels touched the deck.

The last two tidbits I have to pass to you regard aircrew coordination. When you are reading a checklist, always approach it as though you are reading it to the pilot, especially for "rare" emergencies when the pilot's recollection of the checklist specifics may be clouded slightly. My rightseater that night happened to be my skipper, and his cadence and tone of voice allowed us to move through the checklists without my ever having to ask, "What was that last step again?" or "Did you say 127 knots or 137 knots?"

Finally, if you don't carry a piece of black electrical tape on your kneeboard for those nasty lights that aren't behaving, I urge you to do so. In this case, low oxygen pressure caused the master-caution light to flash on each of the approaches. It made an otherwise sporty night trap a little sportier.

Lt. Ognek flies with VAQ-136.



PH1 William R. Goodwin

# My Peter Cain

By LCdr. Larry Vincent

**I**t was a beautiful day in the desert, west of the Colorado River, and I was the instructor for a low-level training flight in an H-60. The student pilot was an experienced Cat II, and both of the aircrewmembers were FRS instructors. In short, it was one of those days where I would pay the Navy to let me fly.

Most of the routine maneuvers had been completed, and we were moving onto the confined-area landings. I picked out



# Overnighter

an LZ near Peter Cain Water Hole, and we did a sweep check, looking for anything that might jeopardize a safe landing. The zone appeared tight but workable, and the crewmen agreed we should set up for an approach. We came into a hover while my crewmen cleared me on both sides and aft. I looked right but wasn't comfortable with the distance between my rotors and the trees. I held my hover and asked the gunner again to check the clearance. My right gunner was a good crewman—experienced, with a solid reputation. He assured me I was OK, and I began to descend.

My scan was forward when I heard some choice expletives, followed by "Climb! Climb!"

I pulled collective and looked right. The trees were moving from the rotor wash, and I decided it was time to find a new LZ.

As we transitioned toward a different part of the working area, my left gunner asked if anyone else heard a "whistling sound" coming from the rotors. I got a sinking feeling and asked the question I should have asked long ago, "Did we hit anything back there?"

The right gunner said he thought we had, so we decided to land, shut down, and check it out. Sure enough, two of the tip caps were mangled badly. It was the first time something like this had happened to me, and, right or wrong, I thought it best to call home base and have them change the tip caps on site.


They couldn't get help to us until the next morning, so I sent my copilot and one of the crewmen home with another helo, while the first crewman and I stayed with the damaged bird. It was a beautiful desert night. We had a good campfire going under a blanket of stars, with coyotes howling in the distance. Unfortunately, I was having a hard time enjoying the moment.

Back home the next morning, the CO chewed my butt and suspended my TERF qual. I also had

to apologize to the duty section for putting them through a sleepless night, and then I had to brief the ready room on the many mistakes I'd made throughout the evolution. I had a long night to think about my errors. I've also been the butt of more weed-whacking jokes, and variations thereof, than I would have thought possible.

Even though this flight was a painful experience, I still consider myself fortunate. I learned a lot that day, but there is one lesson I never will forget. I always have briefed "comfort level" for low-level hops, and I believe my philosophy is standard. We fly to the lowest comfort level. If you're uncomfortable with any aspect of the flight regime, speak up. We'll terminate our training and discuss the source of discomfort. If we can't fix it, we'll knock it off and RTB. I violated my own brief.

My scan was forward  
when I heard some choice  
expletives, followed by  
"Climb! Climb!"

There are large portions of the aircraft the pilots can't clear when flying in confined areas, particularly when operating with NVGs. We must trust our aircrewman implicitly in the TERF environment. I recognized an unsafe situation and let someone else talk me into continuing. I have no one to blame but myself, but it won't happen again. Junior or senior, regardless of positional authority, when my comfort level is exceeded, the training stops. The trees at Peter Cain cost me two tip caps and a bruised ego, but the results could have been much worse. 

LCdr. Vincent flies with HS-14.



# HUD in the

By Lt. James M. Fitzgerald

I was scheduled to lead a division of red-air, supporting an airwing self-escort strike. The airwing was flying on a 1+15 cycle, and I was the last launch of the night. We were a month into our six-month WestPac deployment. Flying at night had become the norm, and my comfort factor was high. My comfort ended when I heard the Hornet's "deedle, deedle," heard the beeping of the landing-gear-warning tone, and saw the light in the gear handle flashing. My section headed to marshal at 17,000 feet and 50 miles from the ship. After gathering my thoughts, I told the skipper—my wingman—the indications: empty airspeed and altitude boxes in the HUD (my primary attitude instrument); a beeping, flashing gear handle; and an intermittent NAVVEL caution. My air-data computer (ADC) had failed.

The ADC in the Hornet provides pitot static and barometric inputs to the flight instruments. After a brief but thorough discussion with the CATCC rep and my lead, we decided the velocity vector and INS-derived E-bracket should be reliable, and the radar altimeter would be accurate below 5,000 feet. We decided to fly a section approach. Naturally, it was moonless, with a 3,000-to-4,000-foot, overcast layer and scattered rain showers. I managed to keep sight of my lead in our descent through the clouds, and to fend off vertigo. We got below the cloud layer and finally were established at 1,200 feet, 10 miles behind the ship.

Suddenly, just as we lowered the gear in the section approach, the windscreen and the HUD completely fogged. I quickly was forced to fly exclusively off my lead, through the left side of the canopy. I fumbled to put the cockpit temperature knob to full hot and the cockpit defog handle to full forward. After I completed these immediate-action steps, I said, "Skipper, you're never gonna believe this, but I just went completely IMC in the cockpit."

His response was a somewhat comforting, "Well, we'll start down and make a decision at two miles or so."

We began our descent, and I loosened up to a more comfortable tacwing position, as I kept looking hopefully for the HUD and windscreen to clear. At two miles, my windscreen had cleared, but the HUD still was fogged completely. I updated my skipper, and, at 1.5 miles, he responded, "Well, it's your call."


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My mistake of not flying a disciplined section approach in parade position cost me a low and lined-up-right start, even though CATCC had called my lead "on and on." I now was off to the races and started making a huge play for lineup and glide slope. The approach literally was like being in the simulator in Lemore, when the console operator had told me the incorrect final bearing. As I made an aggressive lineup correction to the left, the fogged HUD obstructed the ball and the entire ship. I found myself craning my neck to the left and looking around the HUD, while flying the ball. I got a power call and somehow managed to get the jet over the ramp into the 1-wire, albeit with a good left drift. As I taxied out of de-arming, my

HUD completely cleared up.

During the debrief, I identified many things I could have done better. My biggest mistake was not terminating the approach and giving the HUD a few extra minutes to clear with the cockpit defog. Both jets had plenty of gas for a second section approach, and, most importantly, this delay would have broken the chain of events a mishap board inevitably would have developed. If I had been in the correct parade position, my start would have been much better, and my entire approach would have been much easier and safer. My next mistake was communicating nothing other than the initial ADC failure with paddles or CATCC. I didn't have much time to make my decision, but there would have been if we had discontinued the approach and had given the HUD time to defog. At a minimum, I could have told paddles my velocity might be unreliable because of the ADC failure.

I learned the ECS in the Hornet receives inputs from the ADC. Had I put the cockpit temperature knob to warm or anywhere other than full cold, and had I placed the defog handle full forward instead of leaving it full aft, where it had been since takeoff, the warm, humid, Hawaiian air may not have caused such drastic fogging of my HUD. Last, I realized I never had practiced this type of no-HUD, no auto-throttles approach, with no indexers, during nearly four years of FCLPs in Lemoore. Having done this "circus pass" at least a few times would have made me slightly more comfortable.

I learned later that night the I-wire was stripped because of my off-center engagement, but I considered myself fortunate to have caused only that damage. Hindsight is always 20/20, but, in this case, I just was happy to have landed without hurting anyone or the jet. 

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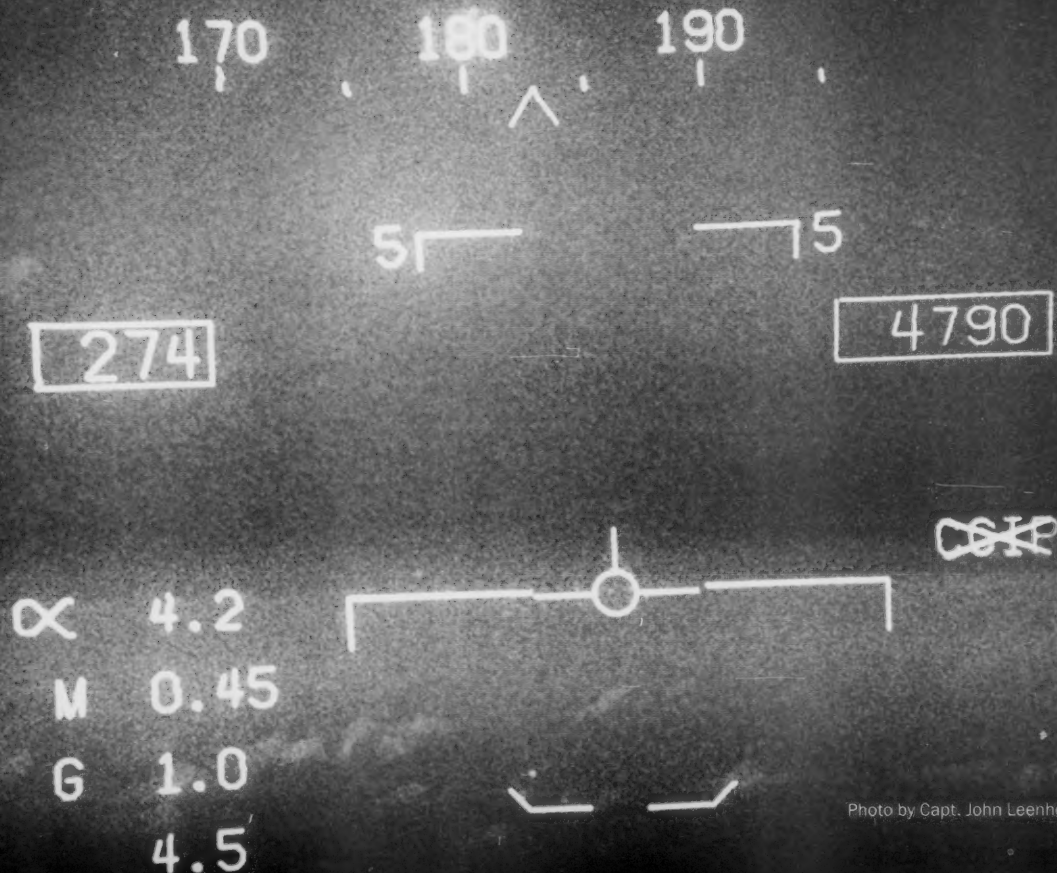


Photo by Capt. John Leenhouts

By Lt. James M. Fitzgerald

I was scheduled to lead a division of red-air, supporting an airwing self-escort strike. The airwing was flying on a 1+15 cycle, and I was the last launch of the night. We were a month into our six-month WestPac deployment. Flying at night had become the norm, and my comfort factor was high. My comfort ended when I heard the Hornet's "deedle, deedle," heard the beeping of the landing-gear-warning tone, and saw the light in the gear handle flashing. My section headed to marshal at 17,000 feet and 50 miles from the ship. After gathering my thoughts, I told the skipper—my wingman—the indications: empty airspeed and altitude boxes in the HUD (my primary attitude instrument); a beeping, flashing gear handle; and an intermittent NAVVEL caution. My air-data computer (ADC) had failed.

The ADC in the Hornet provides pitot static and barometric inputs to the flight instruments. After a brief but thorough discussion with the CATCC rep and my lead, we decided the velocity vector and INS-derived E-bracket should be reliable, and the radar altimeter would be accurate below 5,000 feet. We decided to fly a section approach. Naturally, it was moonless, with a 3,000-to-4,000-foot, overcast layer and scattered rain showers. I managed to keep sight of my lead in our descent through the clouds, and to fend off vertigo. We got below the cloud layer and finally were established at 1,200 feet, 10 miles behind the ship.

Suddenly, just as we lowered the gear in the section approach, the windscreen and the HUD completely fogged. I quickly was forced to fly exclusively off my lead, through the left side of the canopy. I fumbled to put the cockpit temperature knob to full hot and the cockpit defog handle to full forward. After I completed these immediate-action steps, I said, "Skipper, you're never gonna believe this, but I just went completely IMC in the cockpit."

His response was a somewhat comforting, "Well, we'll start down and make a decision at two miles or so."

We began our descent, and I loosened up to a more comfortable tacwing position, as I kept looking hopefully for the HUD and windscreen to clear. At two miles, my windscreen had cleared, but the HUD still was fogged completely. I updated my skipper, and, at 1.5 miles, he responded, "Well, it's your call."

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February 2003

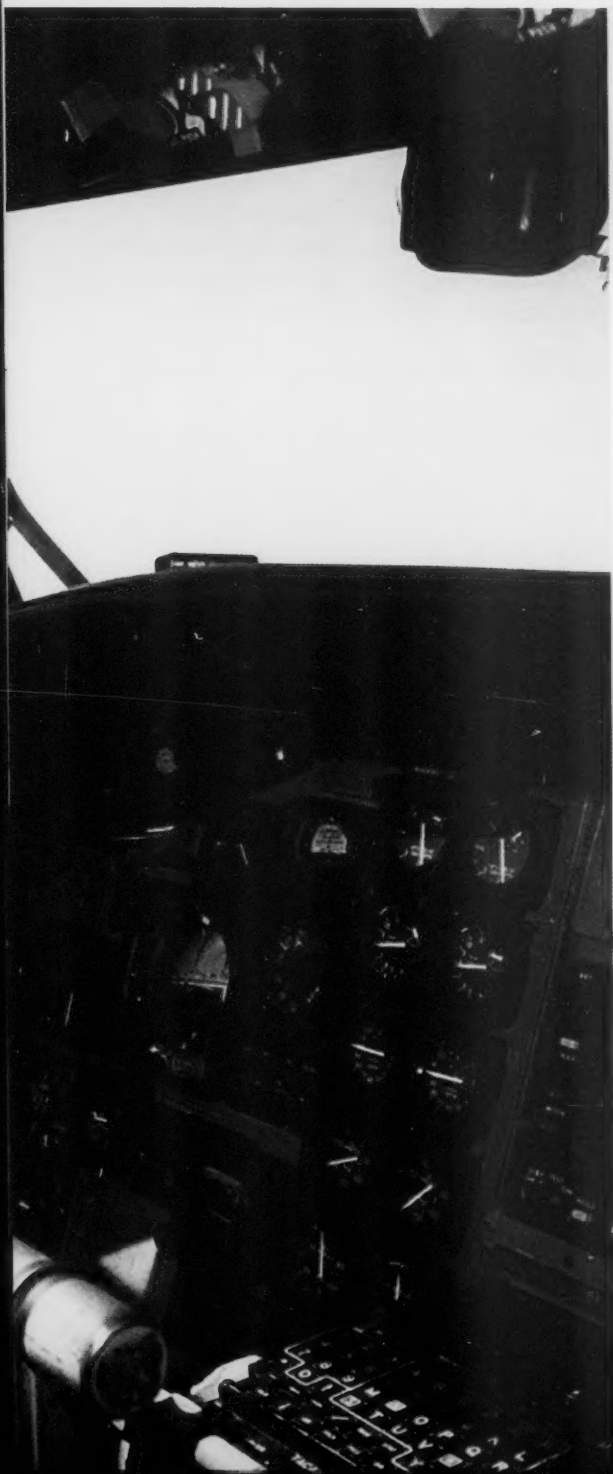
# The Grumman Hawke



February 2003

Photo by PHAN Michael B.W. Watkins

# ye Breaks Down



By Lt. Jerry Schafer

**A**s a new naval-flight officer (NFO) in the squadron, I was excited to participate in a cross-country flight from Point Mugu, Calif., to Norfolk, Va. I recently had left the fleet-replacement squadron (FRS), and I planned to visit friends.

With me in the backend of the aircraft was a new mission commander, who sat in the middle seat, and another recent FRS grad. Up front, the pilot was an experienced carrier-aircraft plane commander (CAPC), and in the right seat sat a cruise-experienced copilot.

The trip began uneventfully: We stopped in San Antonio for gas, thinking if we broke down, at least we would be stranded in a fun town. After taking on 12,000 pounds of fuel, we continued east and planned to arrive in Norfolk in four hours.

A cross-country flight in an E-2C usually is not very taxing on the NFOs. Once we had verified we had a good radar, we placed it in standby, opened our windows, and trusted ATC to keep us clear of traffic on our IFR profile. It's easy to relax in a dark, vibrating tube when you have no mission to perform. I jokingly even considered breaking out my guitar from the aft equipment compartment. What happened next would make me thankful I didn't.

About 90 minutes after stopping for gas, while cruising at 25,000 feet, we heard a loud bang. The plane violently lurched upward, then back down, as the autopilot went off, and the pilot quickly regained control. "Holy Cow! What happened?" cried the mission commander over the ICS.

"I've got it! I've got it!" called the pilot, reassuringly.

We made sure we were strapped into our seats and began analyzing the situation. All of





our systems in the back went haywire. The vapor cycle, which is essentially an air conditioner for our electronic equipment, gave out, and, therefore, our scopes went off. Three of the five UHF radios also went off, while the other two barely were working. Initially, we thought we had blown a generator and perhaps a few other key electrical components. The emergency generator clearly was not working, which was perplexing.

We also had depressurized, so the crew donned oxygen masks. The pilot began a descent and squawked 7700. We had lost 5,000 feet of altitude in the 30 seconds since the loud bang. The pilots' radio was useless, so they weren't talking to ATC. We eventually contacted ATC on one of the radios in the back.

Although we were on IFR profile, conditions marginally were VMC. A hazy but visible horizon reassured the front end since all of their attitude sources were useless. In addition, the aircraft's trim seemed to be malfunctioning, and the pilot had to exert considerable pressure on the yoke to maintain proper attitude.

It quickly became clear we couldn't continue to Norfolk in our condition. We had to find a suitable divert and land as soon as possible. Our choices were NAS Pensacola, which was 150 miles to the south, or we could turn around and head for NAS Meridian, which was 80 miles to the southwest. We decided on Meridian, based on the difficulty the pilot was having in controlling the plane without trim. The weather also was better to the west. If we couldn't maintain a visible horizon in our condition, our situation could rapidly deteriorate into a bailout scenario.

ATC was extremely helpful in clearing us a path direct to Meridian. Along the way, the copilot took the controls for a period to give the pilot a break. He would need all his strength to control the plane once we slowed and entered the landing configuration.

We commenced a straight-in approach to NAS Meridian. Both pilots had their hands on the yokes for much of the time. For the touchdown on the runway, the pilot completely took over and managed to guide the plane to a reasonably gentle landing. We congratulated and thanked the pilots from the back and told tower we would taxi off the runway and park on the transient line. Unfortunately, we were in Meridian instead of Norfolk, but we and our plane were intact.

The investigation confirmed some of our initial assessment about what had failed in the plane

**About 90 minutes after stopping for gas, while cruising at 25,000 feet, we heard a loud bang.**

was correct. The left generator had failed. Ordinarily, a bus-tie is made, which allows one generator to power the aircraft's systems. In our case, the bus-tie failed, resulting in an apparent random array of systems still being powered. The plane's trim subsequently failed, as did the cabin-pressure-outflow regulator, which caused our loss of cabin pressure.

We were satisfied in how we handled the emergency. The moment we realized the cabin pressure was gone, we donned oxygen masks and were up on ICS in less than 30 seconds. Although no emergency procedure in our pocket checklist covered the symptoms, we had our PCLs cracked open. In the back, we helped the pilots find a workable radio, and we helped coordinate our divert to Meridian with ATC.

Instead of Norfolk, the five of us enjoyed three days in exotic Meridian, Miss. A detachment of squadron maintenance personnel flew in and repaired the aircraft; it was an easy fix.

Lt. Schafer is a naval flight officer with VAW-113.



# Feline Frequent Flyer, Or The Cat's Meow

By 1stLt. Bryan E. Trinkle, USAF

**O**n the afternoon of Sept. 12, 2002, an instructor and two VT-31 students just had completed a routine T-44A instrument-training hop in the South Texas area. The three-hour flight included approaches and touch-and-goes at NAS Corpus Christi, NAS Kingsville, Kleberg Co. and Alice.

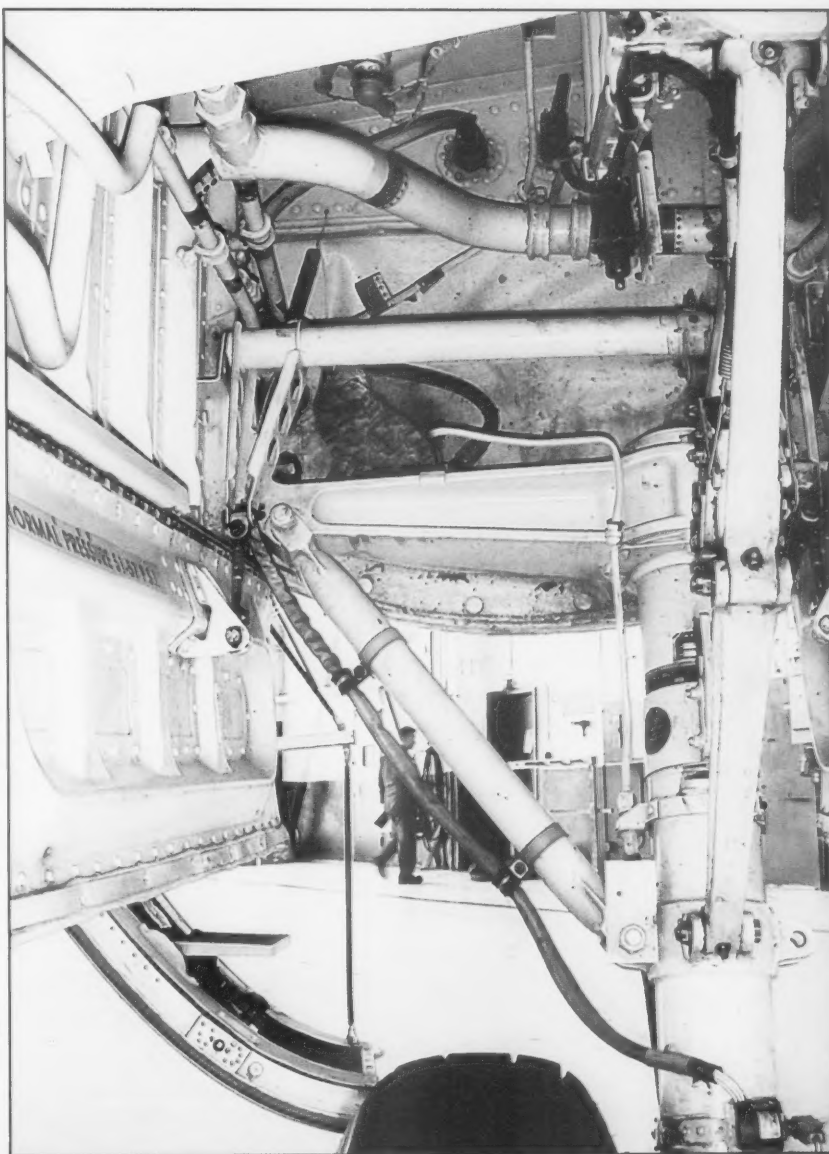
When all the training objectives were completed, the aircraft commander full stopped at Corpus Christi. As the props were winding to a stop, the Raytheon lineman heard a loud and uncharacteristic sound. The crew completed the secure checklist and began the aircraft postflight, with the lineman in search of the problem.

The flying and ground crew uncovered the problem, and it wasn't an unknown mechanical failure. The strange sound the lineman had heard was the terrified "meow" of a greasy brown and gray kitten in the left, aft wheelwell of the Pegasus. No one knows when or why the kitten found the landing-gear crossmember to be a suitable place to pass the time. Perhaps the most amazing thing is the kitten avoided falling to its death from the wheelwell—considering the open gear doors and approach speeds of 150 knots. The kitten survived seven touch-and-goes, a max reverse, and a full-stop landing. If cats could talk, we only can imagine what this one would say. This story shows even a good preflight cannot cover all possibilities

or mitigate all risks.

The student pilot now has a new pet. When asked about it, he remarked it was the best flight he'd ever had and wanted to keep the cat for luck.

1stLt. Trinkle flies with VT-31. The student pilot keeping the cat is Ens. Brian Williams.





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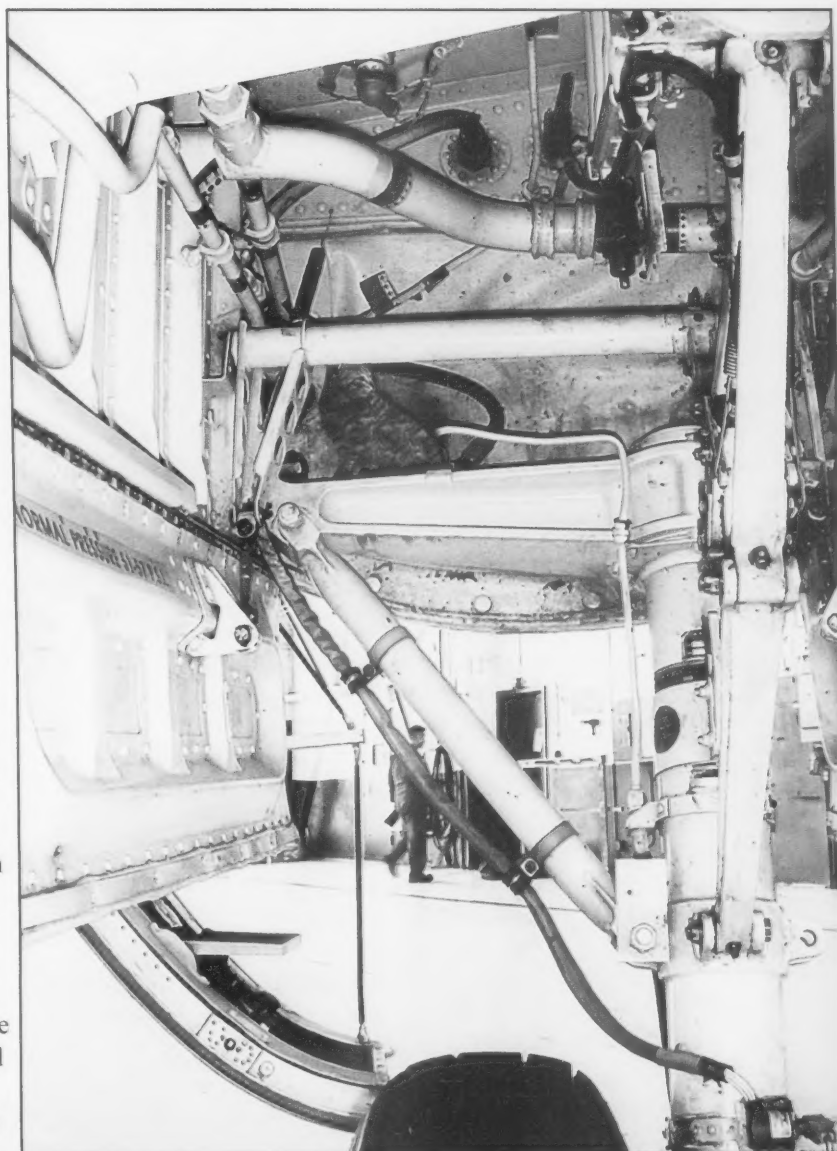
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By Lt. Peter J. Dicaro

**F**light training in Meridian, Miss., presents many obstacles for the future naval aviator. Besides the many hours of studying required to master procedures, you're challenged to transition from an aircraft that can move at barely three miles a minute to one that moves at a blistering five to six miles a minute.

The countless attempts to keep a ball on the lens have sent more than one fledgling ball-flyer on a drinking binge—not that you'd be able to tell the difference. One proposal I heard to help ease the frustrations of the “neo-ball-flyer” was an air cannon loaded with a tennis ball and mounted to the back of the lens. A junior pilot could see the fruits of his labor, as a ball traveling quickly upward would continue off the top of the lens and provide extra ball-flying time. The same cannon could be filled with confetti and would provide an uplifting finale, if not a useful training aid.

For those flight students at Meridian who suffer from the stresses of flight training, probably the most positive move the Navy could make to provide some relief would be to remove a rite of passage. It involves a certain simulator-flight instructor most students know as

“The Yeller.” On the other hand, those flight students who are not intimidated by his boisterous demeanor remember him as an excellent instructor and aviator who is a lot of fun to fly with. It's important to understand “The Yeller's” personality in the cockpit because it directly influences his piloting skills.

“The Yeller” and I were scheduled to fly an OCF-1, an out-of-control flight. This event consists of several varying departures of the aircraft and is meant to increase the student's confidence and ability to recover from spins and other out-of-control-flight situations. After a lengthy discussion about the aerodynamics of a spin, we took to the skies over rural Mississippi.

The first maneuver was an adverse-yaw



departure. I entered the correct inputs, and the Buckeye flipped on its back and began spiraling toward the pine trees.

"Yeehaw! Ride it, baby! Ride it!" came over the ICS. This wasn't the sadistic instructor I had heard about.

As I recovered the aircraft to set up for the next maneuver, a fine mist started to permeate the cockpit. At first, I thought this mist was fog from the air conditioning. Anyone who has flown T-2s knows they can produce a considerable amount of fog on warm, humid, Mississippi days. This fog, however, looked slightly different. Just as I realized this difference, my instructor told me to take a whiff and tell him what I thought. Before I even could say, "Sir, that's JP-5," the controls were passed to the back, and we were in a split-S

out of the working area. Apparently, fuel, oxygen and 115 VAC don't mix well.

The next several minutes should have been turned into a training video on how to handle an emergency. The instructor took control of the situation, knocking out checklists, talking on the radio to several different people, and making it possible for me to act as human luggage—a good thing because I otherwise couldn't have kept up with how quickly he was moving through tasks. Crew coordination is an important aspect of aviation, but the rules change when the other member of the crew is a hindrance, with only 150 hours of flight time. I backed him up the best I could, but I wasn't left with much to do.

We eventually landed the opposite way on the active, despite tower's initial clearance, and rolled to a stop, with the engines already secured. I looked down to grab the pins for the ejection seat, and, when I looked back up, my instructor was on the deck, helmet in hand, talking to the crash crew. He used to brag he could get out of a T-2 faster than anyone in the world; you'll hear no arguments from me.

Aviators are trained to handle emergencies, but few would have handled one so seamlessly and efficiently. The key was quickly executing a solid game plan and aggressively doing exactly what was needed. The instructor wasted no time waiting for me to catch up. He also didn't accept tower's initial instructions to circle around and land to the north when we were approaching from the north.

Maintenance found a significant amount of fuel had entered the bleed-air lines and sprayed into the cockpit. Thankfully, this situation didn't turn into a mishap. The confetti would have been a nice addition.



Lt. Dicaro flies with VAW-113.



PHCS TERRY COSGROVE



# Cleared to Circle to Land, Not Ground Loop

The weather was VMC in Osan, but a weak stationary front ran from central Honshu to the Sea of Japan, covering most of our route's first leg. All the clouds were below 20,000 feet, with broken ceilings and embedded thunderstorms. We briefed our flight as a two-leg trip, with a stop in Iwakuni. However, if the weather kept us from shooting an approach, we would skip the first stop and continue west, cross the FIR boundary between Japan and Korea, and fly straight to Osan.

As we cleared the ever-present haze layer, which blanketed the Kanto Plain, I could see the clear skies

By Lt. Derek Dawson

"This will be a surveillance approach to runway 02, circle to land 20. MDA is 580 feet."

This definitely was not the best way to start a cross-country. We were a section of Hornets on our way from NAF Atsugi, centrally located on the big island of Honshu in Japan, to Osan AFB in South Korea. A three-ship of my squadronmates were 15 minutes in front of us, heading to MCAS Iwakuni. Like my section, they were dropping into the Marine base located on the western edge of Honshu for a quick gas and go.

ended in an ominous, gray wall over Mt. Fuji, just 20 miles west of Atsugi. As we got closer to Iwakuni, Metro reported the current field conditions to be 2,000-to-3,000-foot ceilings, unrestricted visibility with



tempo conditions of 1,000-foot ceilings, and with visibility decreasing to two miles. Metro also reported the PAR was operational—although ATIS said it was down—with ASR approaches being provided.

Approach control reported that, because of the prevailing ceilings, the overhead was closed,

I began my approach, saw the runway 02 rabbit lights at 1,100 feet AGL, and broke out underneath at 600 feet. Runway visibility was fine, but I noticed the storm sweeping south across the airfield perimeter. It would be a race to see who got to the runway first: me, on my circling approach, or the storm cell.

As I started my circling maneuver, I descended to 450 feet AGL to stay under the weather. I thought the race was won; I would get in just before the black wall of rain swept over the runway. I reached the abeam and began my approach turn. Starting a landing at 450 feet felt a lot different than the 600-foot pattern, so I concentrated more than normal on my

altitude. I peeked at the field,  
then at the 135, and saw  
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The only thing  
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and the PAR was down. We decided to shoot the ASR. After a quick trip through the hot pits, we'd be back in the air. Approach gave us individual squawks, and we separated.

Mountains surround MCAS Iwakuni on three sides. A bay parallels the runway to the east. The rising terrain forces you to fly circling approaches to

discern were four red lights lined up to the north. I assumed they were the rabbit lights for runway 20 and continued my approach, using the lights for lineup information. As I passed through 200 feet AGL, I got nervous, but I thought I had everything squared away. I rolled out, lined up on the lights, and broke out at 90 feet AGL.

That's when I saw those red lights were not rabbit lights—they weren't even lined up on the runway.

The lights were  
1,000 feet left  
of the runway  
and lined up  
directly with a

runway 20 to the east of the field, followed by a sharp hook to the left to avoid overflight of an industrial complex less than two miles north of the field.

I requested my wingman to shoot the approach first. He commenced his approach, and I was vectored into a position 10 miles in trail. My wingman didn't report any problems during his approach, so I thought everything was OK. What we didn't know was a thunder cell was approaching rapidly from the north.

row of Japanese Maritime Self Defense Force P-3 hangars that shared the base with the Marines. I immediately made a big lineup correction while holding my altitude just below the clouds. I overshot the comeback slightly and touched down nearly 2,000 feet down the 3,000-foot runway.

I just had used one quarter of my available runway and now had to stop a Hornet in high crosswinds and on a wet surface. As soon as I touched the brakes, the jet immediately hydro-

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Mountains surround MCAS Iwakuni on three sides. A bay parallels the runway to the east. The rising terrain forces you to fly circling approaches to

discern were four red lights lined up to the north. I assumed they were the rabbit lights for runway 20 and continued my approach, using the lights for lineup information. As I passed through 200 feet AGL, I got nervous, but I thought I had everything squared away. I rolled out, lined up on the lights, and broke out at 90 feet AGL.

That's when I saw those red lights were not rabbit lights—they weren't even lined up on the runway.

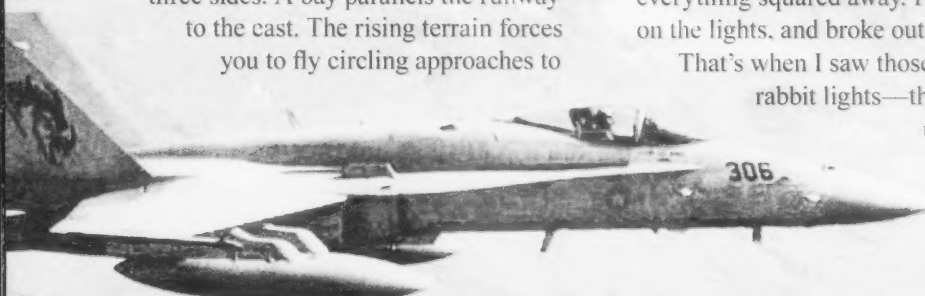
The lights were  
1,000 feet left  
of the runway  
and lined up  
directly with a

row of Japanese Maritime Self Defense Force P-3 hangars that shared the base with the Marines. I immediately made a big lineup correction while holding my altitude just below the clouds. I overshot the comeback slightly and touched down nearly 2,000 feet down the 8,000-foot runway.

I just had used one quarter of my available runway and now had to stop a Hornet in high crosswinds and on a wet surface. As soon as I touched the brakes, the jet immediately hydro-

runway 20 to the east of the field, followed by a sharp hook to the left to avoid overflight of an industrial complex less than two miles north of the field.

I requested my wingman to shoot the approach first. He commenced his approach, and I was vectored into a position 10 miles in trail. My wingman didn't report any problems during his approach, so I thought everything was OK. What we didn't know was a thunder cell was approaching rapidly from the north.



planned. With 4,000 feet remaining, I was at 130 knots, and my nose was pointed 45 degrees to the right of runway heading. I got off the brakes, pumped in left rudder, and dropped my hook. A few seconds later, which seemed like an eternity, I felt the tug of the E-28. Rain was coming down in sheets. Visibility was so low that, from where I sat, next to the one board, I could not see the end of the runway. I told tower in my calmest voice I had taken a trap, visibility was 1,000 feet or less, braking action was zero, and they should close the runway. By the time I got off the runway and taxied to the transient line, the cell had passed, and the field again was VMC.

Later, while debriefing with my wingman, we came up with lessons learned. Though we had plenty of fuel to fly to our second-leg destination, we stood by our decision to shoot the approach into Iwakuni.

We had talked with the station forecaster within 15 minutes of landing. The weather required for the circling ASR approach was 580-1. The worst tempo condition was reported as 1,000-2. Further, metro didn't indicate any storm cells in the immediate area. Nonetheless, in the event we didn't break out, we didn't have a backup plan ready to put into action.

Most importantly, I relearned a basic lesson taught in instrument-ground school. I lost sight of the runway environment after I commenced my circling maneuver. Despite the deteriorating conditions, I wanted to get the jet on deck. I pressed my landing, even though a missed approach definitely was in order. OPNAV 3710.7 states you must commence a missed approach "if visual reference is lost while circling to land from a published instrument approach."

How important was it that I land immediately? Every naval aviator is taught fuel awareness not only is prudent but mandatory. On this day, I was not in any imminent danger of running out of gas. I could have executed a missed approach, waited for the storm to pass, and shot a second approach. Even had the weather not cleared in time, our filed divert field was VMC and a short 70 miles away.

Fuel state aside, by committing myself to landing 2,000 feet long on a runway in heavy rain showers, I put myself in a corner. If braking action was poor, I was committed to relying on

the long-field arresting gear to bring my jet to a safe stop.

Last, a more thorough knowledge of the field-lighting diagram may have prevented me from lining up on a set of hangars, instead of the runway. I have flown into Iwakuni several times and have felt confident in my grasp of the airfield layout and visual references. I let familiarity turn into complacency. Although this event was just a routine cross-country flight, I still was responsible for knowing the possible approaches and the airfield diagram. I was not aware runway 20 had no rabbit lights. Being the active runway, the approach end never would have been marked with red lights.

No matter how much you think you have everything suitcased, it's the things that pop up unexpectedly that can get you. This storm caught nearly everyone by surprise—most of all, me.

Lt. Dawson flies with VFA-195.

## Mishap-Free Milestones

VF-154	4 years	(10,000 hours)
VAW-121	36 years	(69,948 hours)
VAQ-134	23 years	(46,800 hours)
VMA-223	11 years	(48,000 hours)
VFA-97	8 years	
VAQ-136	15 years	(24,600 hours)
HMH-463	9 years	(19,000 hours)
VR-51	7 years	(20,000 hours)
HS-15	6 years	(19,500 hours)
VFA-192	19 years	
VP-9	24 years	(145,000 hours)
HS-15	6 years	(20,000 hours)
VAQ-129	10 years	(73,642 hours)
HSC-5	8 years	(16,340 hours)
ComPatReconForPac Kaneohe Bay HI		
Executive Transport		
Detachment	17 years	(14,000 hours)

# When You're No Longer

A  
D F  
**20/20**  
T R U D  
J A N N  
F E B R

By LCdr. Anna H. Stalcup, MSC

**L**ate one evening, a lieutenant was looking for me in the wardroom. He certainly didn't look his usual self. Of course, being an FA-18 pilot on cruise isn't a relaxing job, but he looked stressed.

"I need to talk to you," he said, "I almost had a ramp strike tonight. I'm going to the skipper to turn in my wings right now unless you think it could be my eyes causing my problems."

While we walked down to medical, he explained his vision always had been better than 20/20, and it still seemed OK, except while flying at night.

After checking his visual acuity, I found he was 20/25 in each eye. He was a bit myopic and needed a minor correction.

It is common for people only to notice a vision problem at night, when the correction is mild. Nighttime pupil dilation accentuates the problem and makes it more noticeable. Some people might have night myopia where they become more nearsighted at night, since their eyes don't know where to focus.

I told our pilot, "We can make you glasses now, so you can get an upchit and fly right away if you're on the schedule." I added, "The glasses should definitely solve your problem."

"Can I take this prescription into port so I can get contact lenses?" the lieutenant asked.

"No," I explained, "a contact-lens prescription and glasses prescription are different. The spectacle prescription includes the power of the lenses only. However, a contact-lens prescription also includes the manufacturer, type of lens, base curve, and diameter. We would need to put lenses on your eyes, then check the fit and your vision with the exact type of lens you would be flying in."

"I definitely want to try contact lenses," the



pilot responded. "I even hate wearing my non-prescription sunglasses when I fly; they seem to block some of my peripheral vision."

"Well," I continued, "contact lenses are a superior method of correcting refractive error, since they maximize the field of view, minimize aberrations, and, because there is no frame, you don't have to worry about interference with a helmet, oxygen mask, night-vision goggles, or laser-eye protection."

I told him we would try fitting him with soft contact lenses: the most common type. They are oxygen permeable and comfortable; however, they do increase the risk of infection, especially if they aren't cleaned and disinfected properly. A poor fit or extended wear can cause corneal hypoxia, which leads to corneal swelling, a possible change in prescription, and increased risk of infection. The cornea is the clear, outer part of the eye the contact lens covers. It gets oxygen from the air so the contact lens can block some of the oxygen. Daily wear contact lenses, which you remove before sleep, are healthier and safer for the cornea. Extended-wear lenses typically are fitted for patients' convenience. With these lenses, there is a greater incidence of ulcerative keratitis, a corneal infection that can lead to blindness. Soft extended-wear lenses are fitted on a modified flex-wear schedule, in which the lenses are removed nightly and replaced at programmed intervals. Pilots and aircrew should not be sleeping with the contact lenses unless there is an operational need—maximum seven days and nights.

After the lieutenant put the trial lenses in his eyes, I checked his vision and the fit. His vision was better than 20/20, the lenses fit well, and he said they felt comfortable.

"Are there any disadvantages to wearing contact lenses?" the pilot asked.

"More care is required," I replied. "The risk of infection also increases, and you could have problems with the environment. For example, if you have allergies or dry eyes, contact lenses could make them feel worse. In addition, if you are flying with an oxygen mask that doesn't fit perfectly, air might blow into your eyes and irritate them. Theoretically, the lenses could dis-

lodge in flight, although that rarely happens with soft-contact lenses."


"I like the way I can see with these contacts, Doc. Am I authorized to wear them while flying?" asked the pilot.

"I need to have you come in for a follow-up appointment in two weeks to make sure the lenses still fit well," I replied. "I also need to make sure you aren't having any problems with the contacts. If everything looks good, the flight surgeon can give you an upchit, authorizing you to wear the contact lenses. Until then, wear your new glasses, and let me know how your next flight goes."

Contact lenses are approved for aviation-designated personnel; however, aeromedical clearance is required. In other words, you must meet visual-acuity standards while wearing the contacts. The contact-lens usage must be authorized on an upchit, which your flight surgeon can issue.

#### **Guidelines for aviators who wear contacts:**

- Carry clear spectacles in an accessible case.
- Check contacts for damage or discoloration before inserting them.
- Clean and disinfect lenses as directed.
- Clean lens case weekly.
- Schedule regular progress exams, as directed by your optometrist.
- Wear protective eyewear during racket sports.
- Preflight your lenses daily:
  - ◆ Look good. Do lenses and eyes look good?
  - ◆ Feel good. Any discomfort?
  - ◆ See good. Check acuity in each eye.

Never wear lenses with red or irritated eyes, and never change lens brand, type or parameters without professional guidance. It also is safer not to change or mix solutions or use any eye drops without first talking to your optometrist. 

LCdr. Stalcup is an aerospace optometrist and was the head of the optometry clinic at Naval Aerospace Medical Institute. She is currently head of the optometry department at the Naval Ambulatory Care Center, Groton, Conn.

# ORM Corner



## We Don't Need No Stinkin' Rules. Do We?

By LCdr. Bruce Hay

**T**his is the second time I've written to *Approach* about this particular flight. The first time was shortly after the flight happened almost eight years ago. In the years since, I have reflected on the only time I truly thought I was going to die in a naval aircraft.

The EA-6B community has gone through many changes since that memorable flight: no low-levels, no BFMC, FLE induced G restrictions, several mishaps and the eventual reintroduction of both

low-level and BFMC flights. However, I believe the most significant change is the introduction of low-altitude awareness (LAA) and low-altitude tactical training (LATT). I am going to give you a quick narrative of the flight, then dissect it, using LATT rules.

The flight was the first leg in an all JO, low-level, cross-country throughout the western United States. We were going to RON at MCAS El Toro via the VR-249, with en-route stops at Mountain Home AFB via the IR-301, and NAS Fallon via the VR-1352. It was mid-December,

Please send your questions, comments, or recommendations to Ted Wirginis, Code 11 Naval Safety Center, 375 A Street Norfolk, VA, 23511-4399 (757) 444-3520 ext. 7271 (DSN-564) E-mail: [theodore.wirginis@navy.mil](mailto:theodore.wirginis@navy.mil)



and we had returned from deployment four months earlier. On the day of the flight, the weather was typical Pacific Northwest: low ceilings, rainy and cool. The weather en route was supposed to be better but not great until we got nearer to Fallon.

As briefed, I was the only one with a chart for the IR-301, and we ended up making Xerox copies of it for the pilot and the lone backseater. The quality of the copy wasn't great but adequate for everyone to use. Of course, I couldn't remember when the chart was made, nor CHUM'd. We finished the brief, packed up the jet, and took off like three kids with the keys to Dad's prized car.

The weather en route to the IR-301 entry point was as briefed: lots of layers with some breaks where the ground could be viewed. As we got closer, the rain turned to snow, and the ground was awash in white. At the time, the Air Force F-111s flew out of Mountain Home AFB. They were equipped with TFR, we were not.

So, the local controller was a little perplexed as we asked for descent after descending to remain VFR. Finally, as we got close, we cancelled and descended through a thin overcast to enter the low-level. We sped up and flew the first leg with an overcast above us, mountains in front of us, and snow everywhere.

The first leg was uneventful until we approached point bravo and set up for a tactical ridge crossing. We inverted with a pull toward Mother Earth, and the excitement began. As we reached the apex of the ridgeline, we started our pull to fly into the valley. We were greeted by a whiteout. Blowing snow and zero visibility, combined with 450 knots of downward travel, brought us into the valley floor—only a few hundred feet below us. The pilot came immediately to the same conclusion as me, rolled upright, and pulled for the sun.

I dialed emergency in the IFF and stared directly at the radar altitude, fearing it would

**We were greeted by a whiteout. Blowing snow and zero visibility, combined with 450 knots of downward travel . . .**





quickly swing to zero, a tone, and then a date with St. Peter. Instead of being a good copilot, I started talking to the local controller and asked for an IFR pickup. Aviate, navigate, and communicate. The pilot nearly departed the airplane on the top of our climb-out. The cockpit was silent, with nary a communication between any of us.

After a 30-minute, airways-navigation flight around Mountain Home to compose ourselves, we landed uneventfully and briefed for our next flight. Fortunately, that was the extent of the excitement for the cross-country, but it was enough. Now, using LATT rules, I'll point out where we could have saved ourselves a lot of heartache and a mishap waiting to happen.

**Currency:** The LATT rules for the EA-6B community call for at least one low-level flight for the pilot within 60 days, and 120 days for ECMOs. Having just returned from deployment four months earlier, we were low on OPTAR and jets. Looking at my logbook recently, I actually had flown a fair amount in the previous 15 days, but there wasn't a low-level anywhere to be seen in the 120-day timeframe. I was not crewed with the pilot or other ECMO, and none of us had completed any formal low-level training that is now an annual requirement.

**Chart-Brief:** We complied with current LATT rules with respect to thoroughly briefing the route. The IR-301 was a convenient excuse to make a "Scrubby's" run, a semi-famous BBQ place just outside the main gate at Mountain Home AFB, so we were familiar with the route. As I said earlier, the chart was neither current nor CHUM'd.

**Weather:** The rules are 3,000 feet and five miles visibility, which has to be continually reassessed throughout the route. Descents through overcast layer to achieve VMC, while not under positive IFR control, are prohibited. Clearly, we violated both rules here. It shouldn't take a rocket scientist to know a descent through weather in a mountainous area is never a good idea.


**Maneuvering:** Current guidance in the EA-6B LATT program is 500 feet AGL. We flew at 200 feet AGL, which was authorized at the time. It wasn't smart to be that low, considering

the weather and terrain, but we weren't violating any rules. The training syllabus for achieving the LATT qualification now states that ridgeline crossings should not be done inverted. It is a lot more fun to be inverted but not tactically smart because of the amount of wing flashes involved. We again were in the wrong here.

**Knock-It-Off-Terminate:** For once, we used good headwork by climbing off the route and squawking emergency when it was obvious we no longer could continue on the route. Of course, we nearly departed the airplane in doing so, but at least we got one thing right.

**It shouldn't take a rocket scientist to know a descent through weather in a mountainous area is never a good idea.**

Last, I would be remiss if I failed to mention ORM. In December 1994, I'd never heard of it. The first time I remember anything significant about ORM was in 1997, when I was an instructor at the EA-6B FRS, and we were trying to implement ORM in the maintenance department. It's now one of the first things we consider before any flight, and, if we had used it before this flight, we probably never would have flown the first leg as a low-level. If we had, we would have been a lot better prepared for what was ahead.

I still think about this flight from time to time, for obvious reasons. We were three experienced aviators fresh from a deployment, and we nearly killed ourselves on a good deal cross-country. I am glad we now have LATT and ORM as cornerstones of our training and operational programs so no other EA-6B crew has to go through the same soul-searching I've done for the last eight years. 

LCdr. Hay flies with VAQ-139.

# If It's Not One Thing, It's Another

By Lt. Jim Morse

The crew was ready for a breather after a month of high-ops tempo at Masirah AB, Oman. Much to our delight, Drew Carey, Wayne Newton, and two Dallas Cowboy cheerleaders were scheduled for a morale visit to share their comedy, music, and pom-pom tricks. Unfortunately, as the day approached, it became apparent our crew would miss the show to go flying.

After we rotated, the port mainmount gave us an unsafe indication when we selected the gear up. After completing the NATOPS procedures for an unsafe gear-up indication, we decided the malfunction was with an uplock switch. A gear problem meant we had to return the aircraft. Before we could land, though, we had to dump and burn down 20,000 pounds of fuel to be under our max-landing weight. No problem—fuel jettison is a common practice for the mighty Orion. We returned our JP-5 to its origins as we held over the Gulf of Oman. We were bringing home a broken airplane, but the crew was excited because they would be back to see the cheerleaders.

I asked my radar operator to drop the electro-optical camera to inspect the port gear. While scanning past the nose gear, we saw something wrong. Although it was night and was hard to see, we saw fluid streaming down the nose gear. Later, we learned the fluid leaked from the landing-gear-regulator valve that had a stripped and cracked nut. It wasn't bad enough to require turning off our hydraulic pumps. However, my concern was collapsing the nose gear at the higher gross-weight landing.

Everyone sitting near the plane-of-propeller rotation was moved aft. I had all the crew members don their

helmets. We made a final turn toward the field, got wind updates, and completed the emergency-landing brief and checklists.

To make things interesting, the chips light on the No. 4 engine began to flicker, which usually indicates large chunks of metal in the oil stream.

I initially planned to use the 10,000-foot runway to maximize time off the nosewheel. However, with



an impending engine failure, I decided to use 07, the 8,500-foot runway. By choosing the shorter runway, I removed the 10-knot, unfavorable crosswind factor. Because of our close proximity to the field and high gross weight, the engine with the chips light was not shut down. Power-lever movements were small and gradual


two aircraft approaching the 180 as Pilatus PC9 training aircraft. The PC9 is the export version of our new T6 Texan II (JPATS). Through 6.0 DME, one aircraft made it inside the 90 and announced he was a full stop. We again relayed to tower we were an emergency. My mouth dropped when the controller cleared the other aircraft to land.

At 4.5 DME and under 1,000 feet AGL, I announced we were waving off. The PC9 had turned toward a taxiway but still was on the runway. The other aircraft waved off just inside the 180. My flight engineer advanced power to normal-rated, and we slowly climbed out to pattern altitude. We made a four-engine landing on the subsequent pass. I held the nose off as long as possible, then gently lowered it to the deck. For once today, we had no problems. Our timing was not quite quick enough though: We just missed the liberty show.

When I got back to the squadron, I called tower to see what the controller was thinking. He said the PC-9 "was almost clear." He also said he was familiar with that aircraft's limitations and knew the aircraft would have no problem getting off the runway. Still, he cleared me to land with an aircraft on the runway.

While more frustrating than frightening, this experience taught me several lessons. Be wary of complacent controllers. "Almost clear" and knowing aircraft type cannot account for variables the PC9 could have encountered, like a blown tire or flameout. While he knew the limitations of the PC9, he obviously was unfamiliar with my aircraft's limitations and was unsympathetic to a P-3C in an emergency. I let the controller know he put peoples' lives in danger.

Plan for the worst situation. A chips light warrants a shutdown unless an emergency exists, requiring power. What if we had elected to secure No. 4? Our three-engine rate of climb would have been extremely limited with the inability to raise gear, high gross weight, and high ambient temperature.

Next time the Dallas Cowboy cheerleaders stop by your hangar, just put in a liberty chit. 

Lt. Morse flew with VP-40 and currently flies with VT-10.



Photo by Matthew J. Thomas

on No. 4. We declared an emergency.

Finally, when you thought the fun almost was over, I noticed other traffic in the pattern as I rolled onto a 10-mile final for an extended, descending right base to 07. An Omani controller was in the tower, instead of USAF controllers—a common occurrence when Omani aircraft are flying.

At 7.5 DME on final, I clearly could identify the



# To Preflight or Not to Preflight,

## That Is the Question

By LCdr. Tony Pham

As an experienced aviator, I know the value of a good preflight. As a former safety officer, I know there is nothing we do on a daily basis that is so important we should disregard safety procedures. However, in the blink of an eye one Easter morning, I forgot all of that.

We were manning-up for another counternarcotics mission while on detachment in Puerto Rico. Other than having to fly on Easter Sunday, the day began like any other day. We got the mission brief, gave our crew brief, and started to preflight our aircraft. Except for the nugget naval-flight officer, who joined the squadron right after cruise, recently returned veterans from Operation Enduring freedom comprised the crew. Everyone knew their duties, and we proceeded with our tasks like the professional aviators we were.

When we tried to bring one of the engines on-line, it would not turn over. We waited the required time and tried to restart. The propellers tried to turn, but the mighty Hummer wouldn't start, so we shut down and got our troubleshooters into the cockpit. After a few minutes of discussion, we went to our spare aircraft.


We quickly collected our trash and headed over to "Nuts," our "Old Reliable." In our self-induced rush to get the spare started, we hurried our preflights. As the mission commander, I normally would preflight the inside and outside of the aircraft. On this morning, however, I just preflighted the interior and trusted the pilots to do their normal exterior preflights.

We were about to run our prestart checklist when a troubleshooter noticed a gash in the fuselage behind the cockpit. He immediately told the launch coordinator, and we suspended our start

sequence. The gash, which barely had missed the cables and wires inside, was in the pressure bulkhead and would have prevented aircraft pressurization during climb-out. Further damage to the fuselage could have occurred in flight.

We all felt a false sense of urgency that morning—a leftover condition from our last deployment, when we had to do everything possible and allowable to make our launch time.

Otherwise, we left the hostile skies unattended and our flights unshepherded.

We have to keep everything we do in proper perspective, and we never can shortcut established safety procedures. Although we have to trust each other in this business, we also must verify, which is why the NATOPS checklists are written that way. 

LCdr. Pham is the maintenance officer in VAW-117.

## When Things Go Bump *in the* Day and Night

By AE3 Theodore Burbo and AE3 Joshua Deitrick

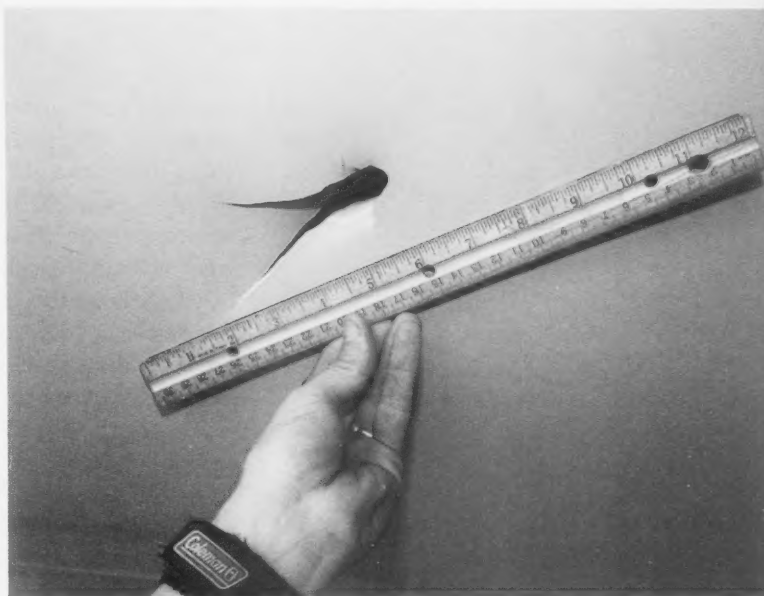
**D**uring a routine preflight walk-around of Banger 600, a large hole was found forward of the main-entrance hatch. Maintenance had no clue how it had gotten there. We traced the evidence and identified how and why this mishap had occurred.


On the previous day, an aviation electrician had repaired a broken wire on the port engine-wire harness. Before he went to work, the mechs removed the engine side panel. They incorrectly placed the large panel beside the aircraft's port mainmount, instead of inside the aircraft, where it would have been safe from other technicians and outside elements.

As the electrician was repairing the broken wire, another aircraft was doing a routine maintenance turn aft of Banger 600. To complicate the situation, a helicopter was taxiing in the same area. The wind created by this combination of turning aircraft and the taxiing helicopter launched the panel into the air. After a short flight, it hit the electrician in the back, but he was able to maintain his balance on the ladder.

Although surprised and slightly shaken, the electrician was unhurt. He could have been injured seriously had the panel hit him harder or had it knocked him off the ladder. A hole was punched in the panel during its brief journey.

The potential for accidents is constant when working with aircraft. Always secure intake



covers or engine panels when you remove them. Our electrician was lucky he wasn't hurt. Keep your head on a swivel when you're around aircraft—no matter what your location. Safety always is the main concern, whether on the boat, on a detachment, or at home. This time, the aircraft was the only thing with a hole in it; next time, it could be you. 

Petty Officers Burbo and Deitrick work in the avionics shop in VAW-117.

# Crew Resource Management

Situational Awareness

Assertiveness

Decision Making

Leadership

Communication

Adaptability/Flexibility

Mission Analysis



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## Learning the D Right and

By Lt. Clay Person

I woke up at 0530 on our third day out of Trondheim, Norway, to a strange but certainly welcome feeling. The frigate actually was riding upright, and my stateroom wasn't turned upside down and inside out.

We were two months into cruise and had finished our C-phase inspection in port the previous week. From the moment we pulled over the last line, we had experienced nothing but 20-foot seas, gale-force winds, blinding snow, and temperatures well below freezing. How odd for the Norwegian Sea in the middle of winter! Today was different; the weather had broken—it was functional check-flight time.

My crew mustered in CIC for the brief. Our ASTAC dutifully passed along the observed climate data and our ship's current position. Our Standing Naval Forces Atlantic (SNFL) task force had been assigned a large patrol box about 20 miles off the Norwegian coast in support of Strong Resolve 02. The last item briefed was the nearest airfield. Today, the airfield was 50 miles away, and it even had a TACAN station. I quickly checked the nautical chart and noted a generally southeast heading to the little airplane symbol—easy enough.

Every brief covered the divert field—that mystical airport on some barren rock in the middle of the ocean, usually well out of range for our SH-60B. While operating far from land, I had grown accustomed to not asking many questions about the divert field. I was a helicopter pilot after all. It would be there if I needed it—and if I could get to it. That's all I needed to know.

We moved to the hangar to complete our NATOPS brief and preflight. We discussed what checks would be required for the FCF, covered how we would handle any in-flight emergencies, and re-emphasized the need for overlapping VFR scans. This was going to be a routine flight, right?

Our rotors were engaged as the sun rose over the snow-covered mountains to the east. We kept ourselves within 20 miles of the ship, a sign of our respect for the freezing water under us. If something went wrong, we didn't want to be ice cubes by the time the ship got to us. The first part of our FCF went flawlessly.



# ifference Between SuorM

I was happy with the way the aircraft flew, and I enjoyed checking off step after step. I felt we were close to coming home with an up aircraft. Just a couple of vibration runs, and we'd be home in time to catch a nap before lunch. Then came the bad news. Our four-rev vibes were out of limits; we would need to do vibration-absorber tuning. My hopes of a quick FCF yielded to the multi-flight marathon day that often is more the LAMPS reality.

We returned to the ship, and our maintainers set us up for the vibe-absorber tuning. We strapped back into our seats an hour later, ready for another go.

"Not so fast," was the word from CIC. Our ship would be involved in a gunnery exercise, and we were grounded until the last of the 76 mm shells was downrange. I muttered some choice words as I got out, but, hey, this was LAMPS. The plans always change.

After lunch, we again got the OK to launch. After a quick look around the helo, I was ready to pull the chocks and chains. I didn't update my brief with combat. Why should I? It still was freezing outside, and the same mountains still were visible 20 miles to the east. Nothing had changed, right?

We lifted off into the afternoon sun. Before we moved to absorber tuning, my maintainers suggested we check our 140-knot vibrations one more time. Some loose hardware had been found, and our vibration levels might have been brought within limits. I accelerated to 140 knots and headed east.



Photo by Matthew J. Thomas

After 10 minutes, we found ourselves about 20 miles from the ship, over some barren barrier-island rocks. Good news came from the back: Our vibes were fine, and we congratulated each other. While my copilot coordinated our recovery, I lazily orbited over the rocks. I noticed a colony of seals sunbathing under us and pointed them out to the crew—hardly the aggressive VFR scan we had briefed earlier.

As we watched the disgruntled seals lumbering into the water, I caught something moving from left to right out the corner of my eye. I looked up to see two Norwegian F-16s passing overhead in landing configuration. I'm not sure how close they were, but my feeling was if you can see the other pilot turning his head to watch your aircraft pass under his, you probably were way too close. I yanked the cyclic to the left to pass further behind them.

Like every savvy LAMPS HAC, I assumed this situation in no way was my fault, and I quickly lambasted the ASTAC for not warning me that two jets were about to turn my Seahawk into an expensive hood ornament. He fumbled around on the radio, telling me he had no radar imagery on



Photo by Nils Mosberg

any strangers. That's when the ice-cold water poured down my neck.

Where exactly was that divert field? I instantly reached down and dialed in the navaid channel. I gulped as the needle swung immediately to the east, and the DME spun to 5.7. We were OK, though. We hadn't swapped paint with anyone yet, and, even if it was a military airfield, the control zone probably started at five miles, right?

It was time to do some explaining. We just would call the control tower and let them know we were at 400 feet and outside of five miles.

I casually contacted the tower and told the controller who we were and what our intentions were. We were Americans, after all, and I could talk my way out of anything—I thought.

What followed was a one-way "conversation" with a Norwegian ATC official who made it very clear I was not welcome in his airspace. He "discussed" how we had come within 400 meters of colliding with two jets on final to land, and he had been trying to contact me for the past 15 minutes. He curtly gave me a heading to fly and "asked" me to expedite my departure from his control zone, which, by the way, extended out to a range of 17 miles either side of the runway centerline.


The only reply I could muster was, "Yes sir...roger...out."

I learned many lessons that day. My first mistake was applying a blue-water mentality to a littoral environment. The divert field was not some dusty strip on a Caribbean resort island. It was a major Norwegian Air Force installation.

There is no guarantee that the regulations we adhere

to in the United States are remotely similar to those of other countries. OPNAV 3710.S specifically requires the aircraft commander to make sure flights are conducted according to applicable regulations, and all NOTAMS and procedures have been reviewed. None of the other pilots on our detachment were aware of the 17-mile control zone either, but that did not matter. I was the HAC, and it was my duty to avail myself of whatever information I needed to operate safely. I failed in this responsibility and risked my crew, my aircraft, and the other pilots in the air with me. An aircraft commander agrees to do these things when he signs the A Sheet and the flight plan.

The biggest disappointment for me that day, though, was my lapse in situational awareness. This was not a routine flight; it was an FCF, and I was in command of an aircraft coming out of a major maintenance inspection. That divert field could have meant the difference between life and death for my crew. I should have known the bearing and range. I should have had the approach plates open and marked. I should have known the frequencies, the runway conditions, and any other information that would have allowed me to land there without talking to anyone and with my aircraft full of smoke. Instead, I launched without knowing where the airport was.

A long day and a moving ship had altered the playing field, and I was the last one to figure it out. Flight planning is not complete just with a morning situational snapshot. We operate in a dynamic environment, and the unforgiving nature of aviation demands we maintain a clear picture of where and how we conduct each flight. 

Lt. Person is the HSL-48 Det 1 maintenance officer.

# A Sign of Weakness?

By Lt. Thomas Wiley

This article was difficult for me to write. The purpose of any *Approach* article is to spread the word: for pilots and NFOs to share their mistakes with fellow aviators to make naval aviation as safe as possible. Most articles talk about mistakes made before or during a flight; my mistake occurred after one.

On Aug. 30, 2000, I was the pilot under instruction (PUI), working on my second syllabus flight for my UH-3H FCF qualification. The crew conducted a thorough brief, checked the books in maintenance control, did the weight and balance, and headed out to what would be the roughest day of my life.

The preflight was uneventful. The plane captain was prepared and had the NC-10 ready to go. The crew chief and crewman completed their required checks and made sure the vibration-analysis equipment was installed properly. I worked on my blade-tracking skills.

As the PUI, I was in the right seat, while the instructor was in the left. He was a lieutenant commander with many hours and a lot of experience in functional-check flights. We started Redtail 212, engaged the rotors, and taxied to the back transient line to begin training. We completed our checks on the ground and requested takeoff clearance to conduct maintenance-hover checks at 100

feet and below. Ground gave us clearance, and we began to rack up the flight time.

We proceeded with several controllability checks while in a hover. I was the pilot at the controls for the evolution. One of our checks involved applying increasing pressure to the tail-rotor pedal and ensuring there was an appropriate amount of resistance. I pushed the left pedal

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“...and headed out to what would be the roughest day of my life.”

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and began a turn on the spot to the left. After turning 45 degrees, the crew heard a loud bang come from the back of the helicopter. By the time I got out my obligatory, “What the hell was



that?" the nose of the helo moved right. Knowing I had lost control of my tail rotor, I immediately began my emergency procedures.

To be honest, I have no idea how many times we spun to the right. It probably was four or five rotations before we hit the deck. I tried to keep the aircraft level during the rotations, but I became more disoriented with each one. I kept trying to use left cyclic to stay level and fight the rotation. This action made the situation even worse, because the left cyclic only put us into a sharp angle of bank before impact. A witness later told me the main-rotor blades were only feet from the asphalt while we still were airborne. I remember the ground slowly coming up as I tried to ease the helicopter down. The engines spooled down, because we had to shut them down in flight, to minimize the counterrotation induced by the torque on the rotor head.

At the last minute, with touchdown imminent, I made a conscious effort to throw the cyclic to the right to roll wings level. Fortunately, it worked. We actually landed square on the landing gear, albeit a little too hard. The force caused the blades to flap low enough to chop off the tail of the aircraft. The landing gear was mangled.

The helo was stricken from the inventory. Fortunately, all four members of the aircrew egressed the aircraft without physical injuries. I almost broke my neck, though; because of my haste, I forgot to disconnect my ICS cord.

Now, we get to the heart of the matter, the lesson I hope everyone takes from this article. This incident really messed me up. I honestly had no desire whatsoever to get into another aircraft. I didn't care if I ever flew again. I thought long and hard about turning in my wings. I still have the letter I drafted after the crash, stating why I no longer wanted to be an aviator.

It was hard for me to admit I could not continue to do what I had trained for—what I had wanted to do all my life. However, I did not quit. My friends and the command convinced me to get back in the cockpit. Everything was going to be all right. But, things were not all right.

Every time I conducted a preflight, I was paranoid that I missed something. Every strange noise or vibration raised the hairs on the back of my neck. The stress I was under often was transferred to my copilots and crewman.

The unhealthy environment in the aircraft went against all aspects of my aircrew-coordination training. I was short-tempered and nervous, which often caused me to get so intense in the aircraft my copilots wouldn't speak to me. To you all, I apologize. I was afraid to fly, but I kept doing it for almost a year and a half.

The biggest mistake I made was not asking for help. The Navy has a lot of services to help its Sailors get through events such as this, but I was stubborn and headstrong. I did not want to admit defeat. More importantly, I did not want to show any signs of weakness. I was not coping well with the crash, and, as a result, all aspects of my life suffered. I had doubts about what I was supposed to do for a career. The downward spiral I found myself in caused me to fall into a deep depression that recently resulted in my marriage falling apart. I still couldn't admit I am only human, and I needed help.

To all the aviators out there, I want you to learn from my mistake. Unfortunately, events like this happen. We have a responsibility, however, to ensure the safety of ourselves, as well as our aircrew. Part of this responsibility is knowing when we have exceeded our limits, and notifying the appropriate personnel about how it could affect our ability to maintain a safe flying environment. We also have a responsibility to our families and ourselves.

Until recently, I felt my feelings were a sign of weakness I was not willing to admit. Maybe, many of you who read my story may feel I am weak; I could not cut it as a pilot. For those of you who cannot relate to what I am talking about, I hope you never have to. However, I also know many of you out there have had a brush with death, and maybe you are going through the same thing.

Do not make the same mistakes I have. Take care of yourself and talk with a professional. Your life and your career as a member of the finest group of aviators on the planet will be better for it. Asking for help isn't a sign of weakness; it is truly a display of strength—the strength to admit that you need help. Fly safe!

Lt. Wiley flew with VC-8 and is currently an NROTC instructor at Southern University.







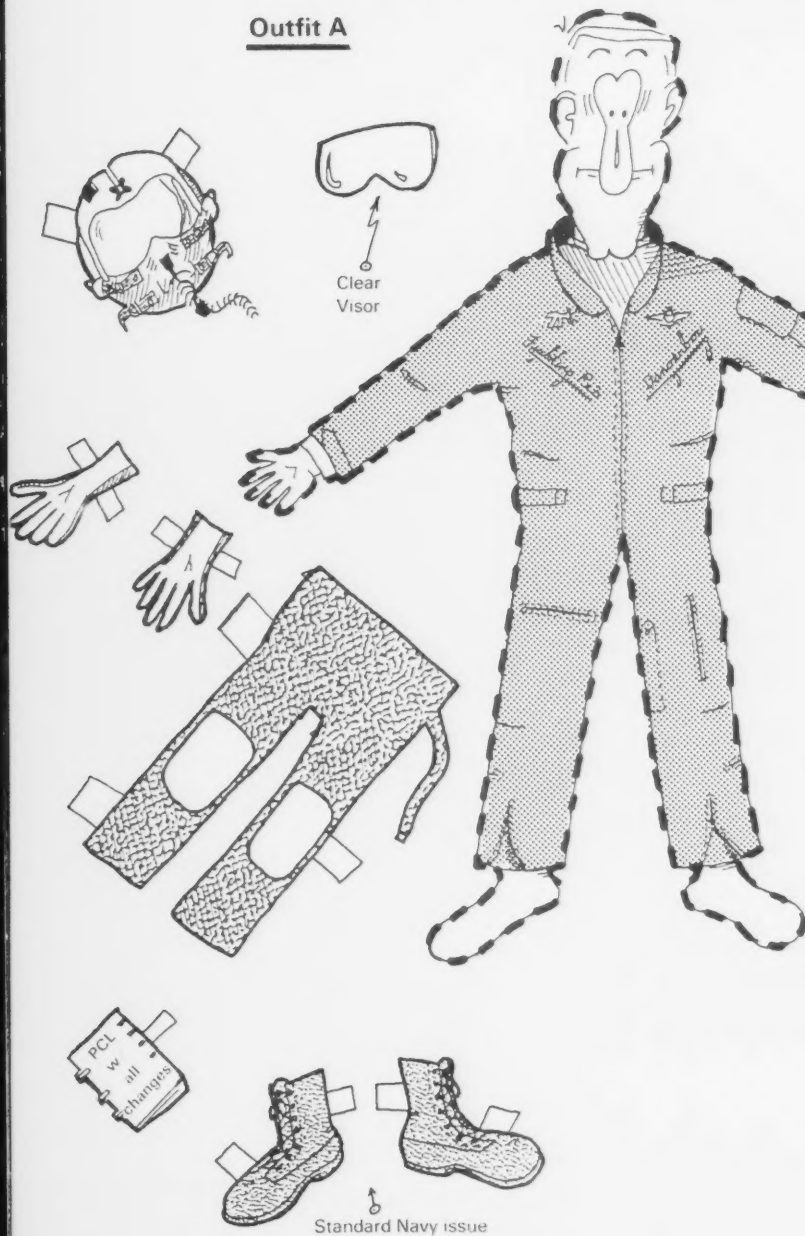


# BROWNSHOES IN ACTION COMIX

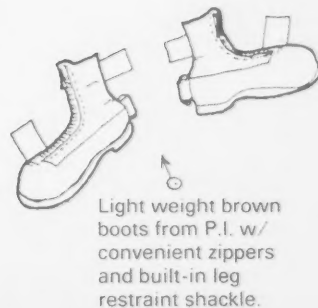
"The kind real aviators like"  
By Lt. Ward Carroll

## SUIT UP DANGERBOY

Outfit A



Outfit B



Which outfit does your squadron wear?

# Ready Room Gouge

Many a life has been  
cut short by

Shortcuts



[www.safetycenter.navy.mil](http://www.safetycenter.navy.mil)

Photo by PMS Amy DeLaTorres

